peptase, the other an ereptase. He hopes soon to arrive at a general conclusion as to the nature of "vegetable trypsin," which by his admirable researches so far seems resolvable into a peptase and an ereptase.—C. R. B.

Structure of chloroplasts.—This has long been in doubt, the current doctrine being that the ordinary chloroplast consists of a stongy stroma in whose meshes the chlorophyll is held as a green fluid. PRIESTLEY and IRVING show[43] that in the large chloroplasts of *Chlorophytum elatum*, *Selaginella Kraussiana*, and *S. Martensii* the chlorophyll is restricted to a peripheral zone, probably less than 1μ thick, where it is held in the meshes of a spongy stroma. This agrees with the arrangement theoretically best according to TIMIRIAZEFF. The authors also confirm the neglected observations of NÄGELI and TIMIRIAZEFF on the splitting of the chloroplasts in solutions of low osmotic pressure.—C. R. B.

Morphology of wheat.—ARTHUR H. DUDLEY,[44] in a presidential address before the Liverpool Microscopical Society, presented an account of floral development, sporogenesis, and embryogeny in wheat. A summary of his results is as follows: the archesporium of the microsporangium is a single row of cells, two or three divisions occurring before the mother-cell stage is reached; the archesporial cell of the megasporangium does not cut off a parietal cell, but produces directly the linear tetrad, the reduction number of chromosomes being eight; a large development of antipodal tissue occurs; and the embryo is said to be derived from the "apical cell only" of the proembryo.—J. M. C.

Scion and stock.—GUIGNARD has made another attempt to settle the question whether compounds peculiar to either scion or stock are able to migrate past the point of grafting.[45] When a plant which contains an HCN-glucoside is grafted on a plant which contains none, or conversely (GUINARD used *Phaseolus lunatus*, *Photinia serrulata*, and five species of Cotoneaster), there is no transfer of this glucoside in either direction. This adds one more bit to the negative evidence that is accumulating against the uncertain positive claims of such migration. The paper contains a good history of the question.—C. R. B.

Tolerance for salts.—Continuing their work on the relation between alkali soils and vegetation, KEARNEY and HARTER, testing pure solutions of various salts, find[46] that different species and even different varieties of the same species differ considerably in resistance to the action of magnesium and sodium salts.

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[43] PRIESTLEY, J. H., and IRVING, ANNIE A., The structure of the chloroplast considered in relation to its function. Annals of Botany **21**:407–413. *figs. 2.* 1907.

[44] DUDLEY, ARTHUR H., Floral development and embryogeny in wheat. Report Liverpool Micros. Soc. 1908 1–19. *pls. 1, 2.*

[45] GUIGNARD, L., Recherches physiologiques sur la greffe des plants à acide cyanhydrique. Ann. Sci. Nat. Bot. IX. **6**:261–305. *figs. 9.* 1907.

[46] KEARNEY, T. H., and HARTER, L. L., The comparative tolerance of various plants for the salts common in alkali soils. U. S. Dept. Agric., Bur. Pl. Ind., Bull. 113. pp. 22. 1907.